# RESPONSE TO THE

# BLUEPRINT FOR WASTE MANAGEMENT

# IN ONTARIO

November 1, 1983

OWMC Ontario Waste Management Corporation

OWMC

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November 1, 1983

The Honourable Andrew S. Brandt,
Minister
Ministry of the Environment
135 St. Clair Avenue West
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Dear Mr. Brandt:

On May 3, 1983, I forwarded to your predecessor, the Honourable Keith Norton, a preliminary response to the Blueprint for Waste Management in Ontario. I take pleasure now in providing you with our more extensive and detailed response to this important document. We will welcome comments on this response from you and your officials and will ensure that it is a feature on the agenda for the Liaison Committee in the coming months.

Your Ministry deserves great credit for this initiative and I trust that our comments will be received in the spirit in which they are intended: working together to ensure the best possible waste management system for Ontario.

Members of the public have expressed great interest in OWMC's response to the Blueprint, and we will be making it available to interested parties over the next few weeks.

With best regards.

Sincerely,

D.A. Chant
Chairman and
President

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## SUMMARY

This response to the Blueprint for Waste Management in Ontario supports and amplifies the points made in the preliminary submission from OWMC dated May 3, 1983, the text of which is appended to this document.

### A GOOD START

OWMC welcomes the Blueprint as a whole and the commitment to public participation it represents. The Blueprint takes the vital first step towards meeting the urgent need to establish the basis for a comprehensive waste management system in Ontario. The regulatory changes it proposes represent a significant advance over the present system, and, to the extent that they affect the liquid industrial and hazardous wastes of concern to OWMC, these revisions will lead to improved waste identification, monitoring, and management. By seeking public involvement and support through a consultation program, the Blueprint recognizes that a key to an effective waste management system lies in a strong social commitment to its goals by all the people of Ontario.

### THE NEXT STAGE

The Blueprint is only a first step, albeit a good one. Ultimately regulations cannot become fully vigorous and enforceable until adequate treatment and disposal facilities are available in Ontario. OWMC's task is to ensure the provision of the full range of such facilities for toxic waste. Therefore, for such waste the program begun by the Blueprint will not come to full fruition until the Corporation's facilities are in operation.

The present document points out those areas in the Blueprint proposal that in OWMC's view must be further strengthened for the policies outlined in it to be fully effective. In some instances the strengthening can be achieved now; in other cases it must await the provision of adequate treatment facilities. In sum, this document states OWMC's view of the direction in which the Blueprint and provincial waste management policies must evolve if public health and the environment in Ontario are to be further protected from the harmful effects of toxic waste.

# THE BLUEPRINT:
# A GOOD START

## INTRODUCTION

In Spring 1983 the Minister of the Environment issued the Blueprint for Waste Management in Ontario, consisting of a report and eleven appendices. In these documents the government of Ontario for the first time examined the broad question of waste management in the province, outlined a plan for addressing the issue in its totality, and sought public involvement in developing its plan. The Ontario Waste Management Corporation (OWMC) welcomes the Blueprint and supports the initiatives it proposes as a vital first step in dealing comprehensively with the pressing modern problem of toxic waste.

## OWMC'S MANDATE

OWMC is a provincial crown agency created in 1981 by the Ontario government to design, construct, and operate a management system in the province for liquid industrial waste and hazardous waste (collectively termed 'special waste' by the Corporation).

At present OWMC is assessing the components and quantities of special waste generated in Ontario, planning facilities and selecting potential sites. The Corporation is also implementing programs affecting the generation and management of special waste, such as encouragement of waste reduction and recycling. A detailed proposal for facilities is being developed with public consultation and will be presented at a formal public hearing. Eventually, OWMC will build and operate the facilities that are approved.

OWMC operates within broad policies established by the Ontario government and will be accountable for its operations to the Minister of the Environment (MOE), who will regulate its activities like those of other waste receivers.

## OWMC'S POSITION

OWMC has great interest in any proposed legislation affecting the generation, handling, and disposal of special waste. OWMC believes that more comprehensive regulation and improved enforcement practices are essential if the impact on human health and the environment caused by improperly handled special waste is to be minimized. However, fully effective regulation and enforcement will only become possible when proper treatment and disposal facilities exist in Ontario for all forms of special waste. OWMC's facilities are being designed to ensure the fulfilment of this condition.

As the key to the development of an effective waste management system, OWMC advocates the following general principles:

- the issue of special waste should be addressed head-on now to avoid future problems
- comprehensive environmental planning with a long-term horizon should be pursued
- public consultation must be integral to the development of the system
- waste management planning must become an integral part of municipal and industrial planning generally.

The comments in this submission reflect these general principles and apply to those parts of the Blueprint that seem likely to affect the management of special waste and OWMC's role in the overall system.

## TYPES OF WASTE

Quite properly the Blueprint notes that 'all wastes are of environmental concern to some degree if not properly managed' and commendably proposes a new classification system that includes all waste. The system is designed to distinguish types of waste according to the risks associated with them and therefore in a general way according to the degree of care required in managing them. The types of waste are grouped in three categories: special waste, the highest-risk category; controlled waste, an intermediate-risk category; and municipal waste, the lowest-risk category.

## DETERMINATION OF CATEGORY

The Blueprint suggests three ways of deciding the category into which a substance fits. The first way uses three lists of dangerous chemicals (Blueprint, Appendix 4). Substances listed in Schedules 1 and 2 are classed as special waste, and substances listed in Schedule 4 are classified as controlled waste.

The second way is by means of testing. If certain formal laboratory tests and criteria applied to a waste stream show it to be ignitable, corrosive, reactive, or pathological, or if it contains more than 1 part per million of a contaminant listed in Schedule 3, it is special waste. If a laboratory test of a waste's 'leachate sensitivity' shows that it exceeds the Ontario Drinking Water Quality Criteria (Schedule 5) by 10 times or more, the waste is a controlled waste.

The third basis of waste classification consists of a number of criteria proposed in definitions in the Blueprint. For example, quantities of specific wastes generated monthly that are smaller than 1 kg and 5 kg in certain cases are excluded from either the special or controlled category, as are liquid industrial wastes discharged by the generator into a sanitary sewer 'in accordance with applicable by-laws' (Blueprint, Appendix 4,

p. 9). Other exclusions apply to certain wastes, emergency situations, and contaminant concentrations.

The schedules of dangerous chemicals and the test procedures outlined represent in our view a good start in the right direction. The next stage will be to review, refine, and perhaps expand the schedules, the testing required, and the applicable standards. The Blueprint proposes the creation of a Hazardous Waste Advisory Committee to oversee questions of waste categorization. OWMC should be represented on this Committee because of its central role in the management of special waste.

## UNREGULATED INDUSTRIAL WASTE

The exclusion of certain types or quantities of industrial waste from regulation as either special or controlled waste raises legitimate concerns about potential risk to public health and the environment. Closer examination of each exclusion will in many cases provide evidence that will dispel these concerns. In other cases the soundness of an exclusion may on close scrutiny become a question of judgement and debate, where certain conditions of management and documentation should be spelled out and required of the generator. OWMC therefore advocates, first, that all wastes excluded from regulation in the Blueprint proposal be formally subjected to close examination and, second, that public consultation be part of that examination.

## SPECIAL WASTE AND CONTROLLED WASTE

There is some possibility of confusion of terms because OWMC itself has used the term 'special waste' to refer to the kinds of liquid industrial and hazardous waste for which its facilities are being designed. However, OWMC's 'special waste' is broader in concept than the Blueprint's 'special waste' and comprises both 'special waste' and 'controlled waste' in the Blueprint's terms. OWMC's definition of special waste is based not on laboratory evidence of hazard but rather on the treatment and disposal

methods applicable to specific waste streams. The Corporation defines special waste as any waste that cannot be safely treated and disposed of in existing public facilities such as municipal landfills and sewage systems.

OWMC is therefore concerned that the Blueprint's special waste category may be too narrow, and that some types of what OWMC regards as special waste actually will find their way into the controlled waste category, where they will receive a lesser degree of care in handling and disposal.

Our concern is heightened by what we consider to be potential deficiencies in the manner in which the controlled wastes are determined. Some of the solids listed as site-specific (controlled) waste in Schedule 4 may well be sufficiently dangerous to be retained as special waste. The leachate sensitivity test also has some deficiencies: the drinking water criteria do not capture all dangerous contaminants; imposing regulation only when these criteria are exceeded by 10 times seems too risky as a lower limit; and the lack of an upper limit, above which a substance becomes special waste, apparently would allow some very toxic substances to qualify as controlled waste.

These concerns make it essential that acceptable management practices be thoroughly investigated and carefully specified. However, when OWMC's facilities come into operation and the Blueprint's regulations can be more rigorously formulated, some components of 'controlled waste' may become promoted to special waste, while for the first time some previously unregulated wastes of questionable safety become controlled.

## WASTE CLASSIFICATION SYSTEM

The Blueprint and OWMC have adopted different waste classification systems. They have different advantages. The Blueprint uses the United States Environmental Protection Agency system developed for the

resource Conservation and Recovery Act (RCRA). That system lists individual substances whose hazardous characteristics can be determined scientifically. By contrast, OWMC's UCD system lists waste streams that actually are generated industrially, can be identified in the field, and are known to require special management. The EPA system attempts to establish a common basis for waste classification across North America. OWMC's system is more closely adjusted to the waste produced in Ontario and makes it easier for waste generators to identify special waste streams and for waste handlers to direct them to appropriate treatment and disposal facilities.

Both classification systems have much to offer, and there is good reason to work towards a common understanding. To this end OWMC commissioned and has received a report associating and comparing the two classification systems.*

## PROPER MANAGEMENT OF SPECIAL WASTE

OWMC believes that special waste must be treated to the highest degree possible by the best available technology, so that only the most stabilized residues remain for disposal. The treatment and disposal facilities must be designed, sited, and managed to the most rigorous standards to ensure the utmost protection of human health and the environment.

### COMMITMENT TO PROPER MANAGEMENT

The Blueprint is a tentative and preliminary document with respect to proper management practices. This may partly be explained by the fact

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*Dillon Consulting Engineers and Planners, Comparison of UCD Waste Classification and MOE Hazardous Waste Definition (Report submitted to OWMC, 31 August 1983)

that an assessment of the risks posed by alternative waste handling methods has not yet been carried out in Ontario. This gap is now being filled to some extent for special waste by OWMC's studies. However, we are concerned by the absence in the Blueprint of any statement of commitment to do whatever must be done to minimize the threats posed by special waste to human health and the environment. In such a commitment lies the assurance of proper assessment, regulation, and enforcement.

## MANAGEMENT PRACTICES

As more becomes known about the degrees of risk associated with various waste handling procedures the regulatory framework will increasingly be able to specify how the different forms of waste should be managed. Information on special waste now available to OWMC suggests that some practices apparently permitted by the Blueprint should be questioned seriously. 'Landfarming' of certain types of waste and landfilling of untreated or incompletely treated special waste, especially liquid waste, are two of these questionable practices. Furthermore, laboratory inspection of every shipment of either special waste or controlled waste to verify its contents prior to its acceptance at any waste management facility is the sort of common sense safety requirement whose absence from the Blueprint is not easy to understand.

An area in which the experience of OWMC will be of direct benefit to the Minister of the Environment is that of standards for siting and operating treatment and disposal facilities. The Corporation's comprehensive site selection process will foster the development of much more precise environmental standards, and the operation of its facilities will suggest benchmarks for specific treatment procedures.

## SOURCE SEPARATION

Vital to proper industrial waste management is effective source separation by the waste generator (the practice of keeping separate the basic

components of a mixed waste stream, at present performed mainly to obtain industrial raw materials for recycling). The waste generator should be required to keep separate not only special and controlled waste generally from conventional waste but also the various types of special and controlled waste from each other. Without source separation, safe handling and effective treatment of the waste may be difficult or impossible. The Blueprint's discussion of source separation should be extended beyond recycling issues to become a general requirement.

## PERPETUAL CARE

Although treatment facilities eventually will be fully decommissioned, an ultimate disposal facility such as a landfill will remain in existence even after it no longer receives residues. The need for a 'perpetual care program' is discussed by the Blueprint and fully endorsed in principle by OWMC.

The long-term containment of special waste residues, even detoxified and stabilized as far as possible, presents an unusual challenge. An important assurance of perpetual care is offered by perpetual ownership, so that the disposal facility cannot be sold or abandoned by those responsible for its maintenance. Ownership by a crown agency seems to provide a significant advantage in this respect over private ownership. OWMC is now investigating the question and will be producing a comprehensive proposal to ensure the perpetual care of its facilities in its presentation to the public hearing panel.

## THE MANIFEST SYSTEM

In OWMC's view the current provincial waybill system has two weaknesses as a means of monitoring the movement of special waste:

- The generator is not informed of and not responsible for the ultimate destination of a shipment off-site.
- Large quantities of special waste moving off the generation site are not recorded.

We welcome the Blueprint's proposed revisions to the manifest system (Blueprint, Appendix 7) as a major step towards correcting these deficiencies.

## GENERATOR'S COPY OF WAYBILL

The revised system would add a sixth copy to the manifest, to be completed by the waste receiver and returned to the generator. If the receiver refuses the waste, the generator must act as receiver and take back the waste from the carrier. Thus the generator remains responsible for the waste until a qualified receiver accepts it. This regulation would also apply to generators shipping waste out of the province.

## PROPOSED COVERAGE

The revisions propose that the manifest system should cover (in the Blueprint's terms) special waste and the site-specific component of controlled waste. In this way the waybill system will come closer than it does at present to covering all of what OWMC regards as special waste, though the possible exclusions mentioned earlier will still be a weakness.

A major loophole in existing legislation and continuing in the Blueprint is that 'recyclable' material is not subject to the manifest system. At the same time, conditions are not imposed on the 'recyclable' classification. Therefore, a generator classifying a material as recyclable would continue to be free of any need to justify the decision or even document it, and the material itself would escape the regulatory system though it might be as toxic as any special waste.

The Blueprint should close this loophole in two steps:

- clarify the conditions in which a material can be classified as 'recyclable';
- state the regulatory requirements affecting the movement and disposition of recyclable materials.

OWMC believes that any substance chemically the same as special waste should be subject to the same management requirements until it has reached its receiver.

## GENERATOR REGULATION

A proper management system requires a means of identifying all sources of regulated waste. The Blueprint takes an important step in this direction with the proposed generator regulation. According to the proposal all generators of (in the Blueprint's terms) special waste and the site-specific component of controlled waste must apply to the Minister of the Environment for a generator identification number and a waste type number for every kind of such waste generated. These numbers establish a basis for the manifest system and extend the tracking to include any generator who stores or disposes of all regulated waste entirely on the generation site. These features are essential to an adequate regulatory framework.

## EXEMPTIONS

At the same time, the generator regulation could be made still more effective:

- Generators applying for exemptions from the regulations for small quantities of waste should be required to propose appropriate

handling procedures for these small quantities and to document these measures afterwards.

- Generators should be discouraged from applying for exemption from the regulations because of an 'emergency situation' by being required to deal with the waste safely and to document the measures taken after the fact.

What these generators should be exempted from is unnecessary paperwork, not correct management practice.

## WASTE IDENTIFICATION

Because information on toxic industrial waste and its dangers is still seriously inadequate, generators require guidance on what wastes require special care. The Blueprint should go further to provide this guidance.

The definition of a 'generator' should clarify the precise point at which waste is created. Criteria for on-site processing are proposed, but it seems to be left to the generator to decide what constitutes a waste-processing facility subject to regulation. There may be an incentive for the generator to escape regulation by claiming that the processing equipment is simply part of the whole industrial operation, that the term 'waste' refers only to final outputs. The regulated 'waste' would therefore never have been 'generated'.

The Blueprint should also consider the desirability of establishing a well-defined waste-testing protocol for generators. The proposed regulation leaves the responsibility to the generator to decide whether or not to test his waste streams for regulated waste. The generator may then judge how far to go in analysing the waste streams to determine whether they contain either any waste listed in the schedules or any waste exceeding the limits according to the various tests prescribed. The problem facing the generator is not eased by the fact that the Blueprint's

classification system is not conducive to ready identification of special or controlled waste. Development of mandatory testing would stimulate rapid and thorough identification of regulated waste in industry.

## CONFIDENTIALITY

Many generators are reluctant to have their waste streams made public in case proprietary information would be divulged to competitors. This position seems most supportable when all types of regulated waste are treated and disposed of under monitored conditions on the generation site. In such a situation the specific waste information could be restricted to the proposed public monitoring agency and made more widely available with only that amount of aggregation necessary to protect individual sources.

However, confidentiality seems decidedly less defensible when waste moves off-site. The public's right to know is more firmly based where impacts, risks, and costs are publicly borne. Arguments for confidentiality must not interfere with proper waste management. The Blueprint should therefore develop a position on public access to generator waste information.

## REGULATION AND ENFORCEMENT

As pointed out in OWMC's previous submission on the Blueprint, until the full range of processes is available to treat the province's hazardous waste streams, regulations cannot be fully developed or enforced. OWMC's single most important responsibility is the provision of such facilities. Thus the Blueprint's eventual effectiveness will in large measure depend on OWMC playing a central role. This fact and the OWMC role should be more clearly acknowledged and developed in the Blueprint.

When the basic prerequisite of the availability of adequate treatment facilites is satisfied, the effectiveness of the waste management system that results will also depend on two additional factors:

- Regulations conducive to enforcement. Such regulations will establish clear areas of responsibility, lines of authority, and monitoring procedures and criteria. The requirements placed on generators, carriers, and receivers should be made even more explicit at that time.
- A commitment to enforcement. Such a commitment will be reflected in an enforcement program with the required personnel and resources for testing, monitoring, and investigation. Enforcement proceedings will reflect the government's determination to protect the public and the environment.

The considerable distance the Blueprint still could go in these directions is a sign of the early stage it represents in the evolution of a complete system for the effective management of waste.

## REDUCTION, REUSE, RECYCLING, AND RECOVERY

The best way to deal with waste is to eliminate it:

- by reducing the amount produced through greater efficiency or changes in processes or products (reduction)
- by extending product life, such as with reusable containers (reuse)
- by extracting material inputs from the waste stream for further productive use (recycling)
- by processing the waste stream to extract further resource value in materials or energy (recovery).

These '4Rs' warrant even more emphasis and attention for special waste than they are given in the Blueprint, which focuses on non-hazardous and municipal waste in this regard.

## OWMC'S ROLE

An important part of OWMC's mandate is to initiate, stimulate, and encourage the 4Rs in connection with special waste. The Blueprint should recognize OWMC's role in this area more explicitly. OWMC is reviewing specific measures to foster the 4Rs such as financial incentives (e.g. to upgrade equipment), financial disincentives (e.g. high disposal fees), technical advisory programs, educational programs, and legislative changes.

## DISPOSAL FEES

For municipal waste, the Blueprint proposes a $1.00 per tonne fee at all disposal sites to provide funding for increased promotion of the 4Rs. OWMC generally supports the extension of this proposal to include special waste, where the surcharge might well be somewhat higher. However, for special waste a fee per tonne may not be as appropriate as a fee based on the degree of hazard of the waste, its potential to be reused or recycled, or some other criterion.

More generally, the financial disincentive of waste handling costs will significantly promote the 4Rs. OWMC's prices for treatment and disposal have not yet been determined, and further consultations with government, industry, and the public are needed to develop the most suitable basis for fees.

## PUBLIC INVOLVEMENT AND SUPPORT

A waste management plan depends for its success on a clear commitment of support on the part of industry and the public. The Blueprint is a commendable initiative to inform and to stimulate discussion. OWMC fully endorses the efforts of MOE to hold workshops and take account of participants' views. We believe that this initiative should become a permanent feature of MOE's waste management planning process.

## APPENDIX
## THE TEXT OF OWMC's MAY 3rd SUBMISSION

In this early stage of evolution of OWMC it is difficult to make specific comments on regulations relating to liquid toxic wastes and the proposed Blueprint, or to predict the ways in which they will affect OWMC policies and the eventual operation of our treatment facilities. Comments on these matters will be an important feature of our continuing discussions with the Ministry.

Nevertheless, even at this early stage, OWMC believes that it must express its views on a number of important issues as the MOE Blueprint proposals take form and develop. And we will wish to comment further as our activities become more focused and we approach our operational phase, and as the Hearings and Approvals procedures that will be a feature of the Blueprint are spelled out in detail.

Our first and most important point is that future regulations and their enforcement must ensure the movement of hazardous wastes to proper treatment facilities, either in the private sector or OWMC's. It should be acknowledged in the Blueprint that the development of regulations designed to provide fully for the management of hazardous wastes in Ontario cannot be accomplished before facilities are available in the province for the effective treatment of all major hazardous waste streams. At the moment, adequate facilities are not generally available in Ontario and their provision is the single most important responsibility of OWMC. In other words, regulations cannot be fully developed until the full range of treatment processes is available to support them.

Second, Ontario's special waste regulations must be designed in a way which is sensitive to Ontario's 'environment' - in the widest sense of that word. While it is sensible for Ontario to take advantage of other jurisdictions' innovations in the regulation of special waste, OWMC suggests that Ontario should be cautious to avoid becoming locked into a framework which might not be appropriate to Ontario's particular circumstances. For example, Ontario would be wise to be very careful and selective in borrowing from the U.S. Environmental Protection Agency's hazardous waste program in view of the serious deficiencies in it which have recently been reported.

Third, whatever the regulations of the day, a convincing commitment to their vigorous and effective enforcement should be an integral part of the Blueprint. This will require a well-resourced enforcement program which in the public's eye is lacking at the moment. Good regulations are valueless if they are not or cannot be properly enforced.

Fourth, the definition of special wastes in the regulations must include all wastes that require special treatment not now available in traditional municipal landfills and sewage systems. The proposed approach suggests that some hazardous wastes in solid form may go directly to landfill under the 'site specific waste' provision. OWMC's position is that special wastes should first be treated to the highest degree possible so that only treated residuals are deposited in landfill. In this way, the natural attenuation provided by a engineered landfill is used as a second line of defence rather than as the sole method of treatment. There should be wide consultation with the public and professional groups before final decisions on the categorization of wastes are made.

Fifth, OWMC supports the efforts reflected in the Blueprint to develop a more refined and comprehensive system for recording the generation of special wastes and tracking them to their final treatment and disposal. Special attention should be given to issues relating to the transportation of hazardous wastes.

Sixth, regulatory changes reflected in the Blueprint should encourage waste reduction, recovery, recycling and exchange. This should include provisions for incentives for these activities and the identification and alleviation of legislative and regulatory disincentives.

Finally, the development of new regulations for special wastes such as those proposed in the Blueprint is an evolutionary process that ultimately will depend on many factors, one of the most important of which will be the commissioning and operation of OWMC's facilities. Even at this early stage the Blueprint should acknowledge this and indicate areas of further regulatory change that will take place when OWMC can offer additional disposal options not now available in Ontario.